

- NOTES: 1. A MINIMUM FALL OF .10' ON MANHOLES THROUGH STRUCTURES AND A MINIMUM FALL OF .20' ON MANHOLES WITH 90 DEGREE BENDS IS REQUIRED.
2. MANHOLES SHALL BE INSTALLED AT DISTANCES NO GREATER THAN 400' APART.
3. GROUT ALL INTERIOR DOGHOUSES AND LIFT HOLES TO INSPECTORS APPROVAL.
4. MARKING POSTS SHALL BE SUPPLIED BY THE CITY AND INSTALLED BY THE CONTRACTOR AT ALL MANHOLES LOCATED OUTSIDE OF THE STREET SECTION.
5. SERVICES SHALL NOT ENTER MANHOLES UNLESS APPROVED BY THE CITY ENGINEER.
6. INFI-SHIELD INFILTRATION BARRIER MANUFACTURED BY SEALING SYSTEMS, INC. OR APPROVED EQUAL REQUIRED ON ALL SANITARY MANHOLES UNLESS APPROVED BY THE CITY ENGINEER.
7. NO MANHOLE STEPS ALLOWED.
8. 2", 4" AND 6" ADJUSTING RINGS ARE ACCEPTABLE.

STANDARD
DETAIL NO.
SAN-01

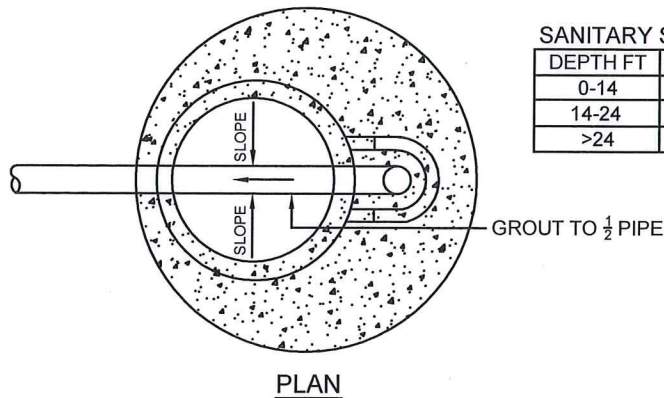
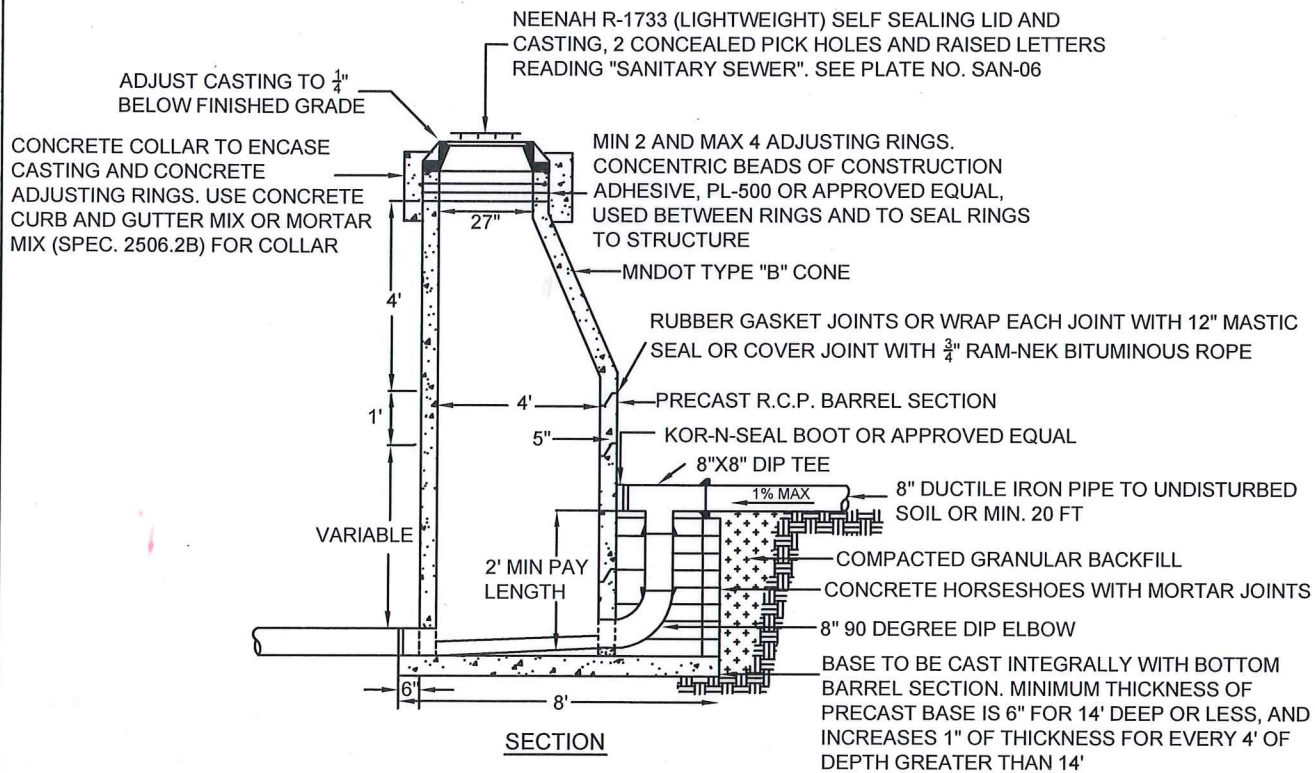
SANITARY STANDARD MANHOLE

APPROVAL 12/16/2014

CITY ENGINEER

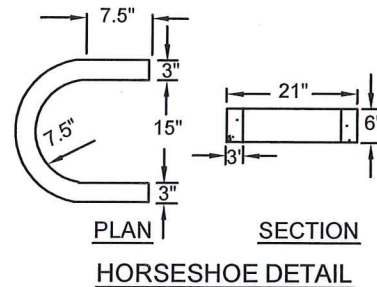
CITY OF RICHFIELD
ENGINEERING DIVISION





SANITARY SEWER PIPE	
DEPTH FT	TYPE
0-14	SDR 35
14-24	SDR 26
>24	CLASS 52 DIP

GROUT TO $\frac{1}{2}$ PIPE



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 2. MANHOLES SHALL BE INSTALLED AT DISTANCES NO GREATER THAN 400' APART.
 3. GROUT ALL INTERIOR DOGHOUSES AND LIFT HOLES TO INSPECTOR'S APPROVAL.
 4. MARKING POSTS SHALL BE SUPPLIED BY THE CITY AND INSTALLED BY THE CONTRACTOR AT ALL MANHOLES LOCATED OUTSIDE OF STREET SECTION.
 5. SERVICES SHALL NOT ENTER MANHOLES UNLESS APPROVED BY THE CITY ENGINEER.
 6. NO INSIDE DROPS ALLOWED.
 7. HORSESHOES SHALL BE FILLED WITH CONCRETE MORTAR ON ALL SIDES.
 8. INFI-SHIELD INFILTRATION BARRIER MANUFACTURED BY SEALING SYSTEMS, INC. OR APPROVED EQUAL REQUIRED ON ALL SANITARY MANHOLES UNLESS APPROVED BY THE CITY ENGINEER.
 9. NO MANHOLE STEPS ALLOWED.
 10. 2", 4" AND 6" ADJUSTING RING ARE ACCEPTABLE.

STANDARD
DETAIL NO.
SAN-02

SANITARY DROP MANHOLE

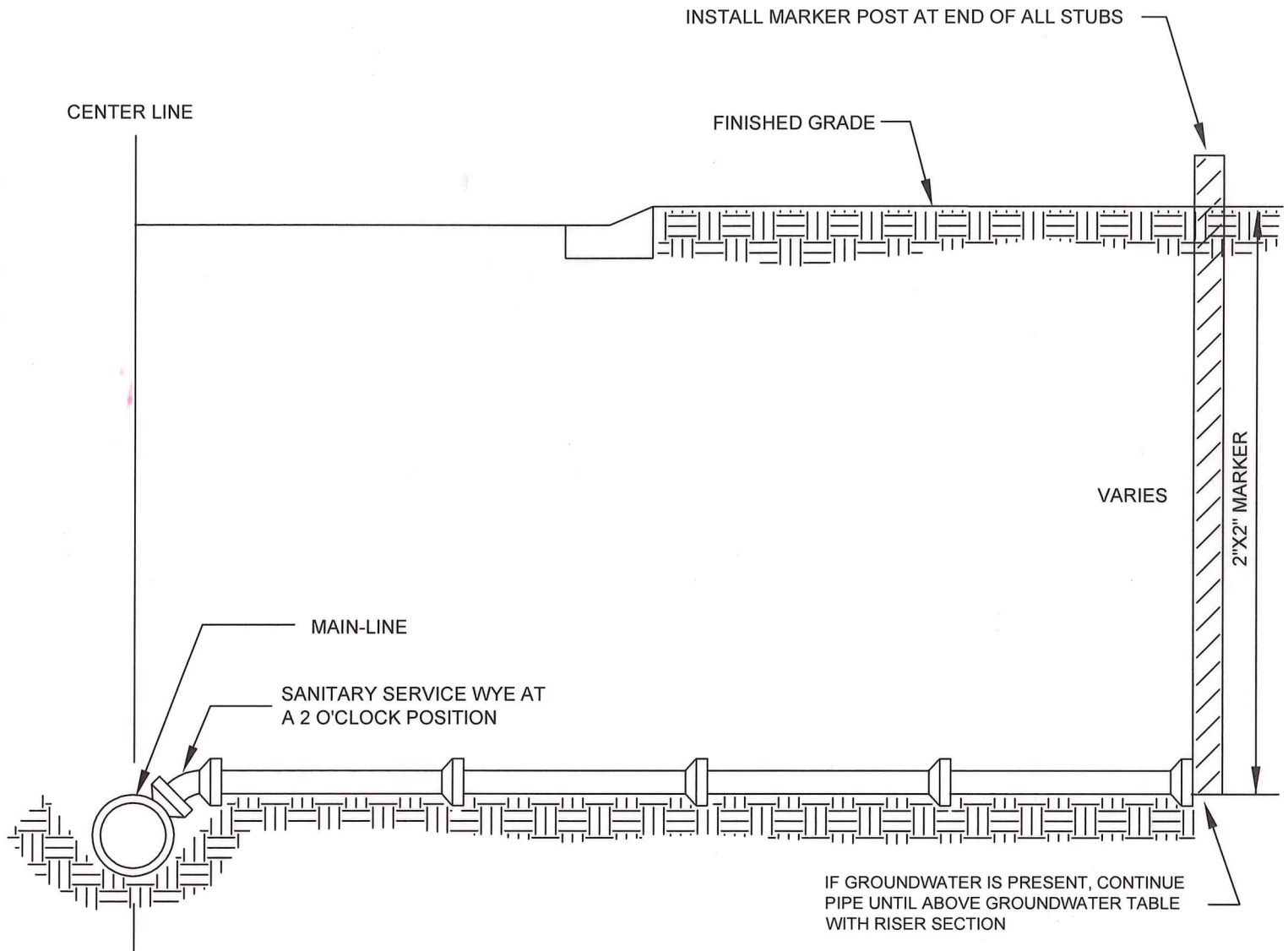
APPROVAL

12/16 20 14

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CITY ENGINEER

CITY OF RICHFIELD
ENGINEERING DIVISION





- NOTES: 1. IF MAIN-LINE IS SDR 26 OR SCHEDULE 40 THEN WYE, PIPE AND ALL BEND SHALL BE SDR 26 OR SCHEDULE 40 TO PROPERTY LINE.
2. WYE, PIPE AND ALL BENDS SHALL BE A MINIMUM OF 4" FOR RESIDENTIAL AND 6" FOR COMMERCIAL.
3. MINIMUM SLOPE FOR 4" AND 6" SERVICE IS 2%
4. CLEANOUTS REQUIRED FOR EVERY 100' OF SERVICE.
5. EXCESSIVE SANITARY SEWER MAIN-LINE DEPTH MUST BE RECEIVED AND APPROVED BY THE CITY ENGINEER.
6. CONNECT TO EXISTING SERVICE PIPE WITH APPROVED COMMERCIAL ADAPTOR AND ENCASE IN 6" MINIMUM CONCRETE.

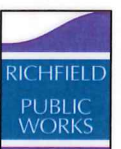
STANDARD
DETAIL NO.
SAN-03

TYPICAL SANITARY SEWER CONNECTION


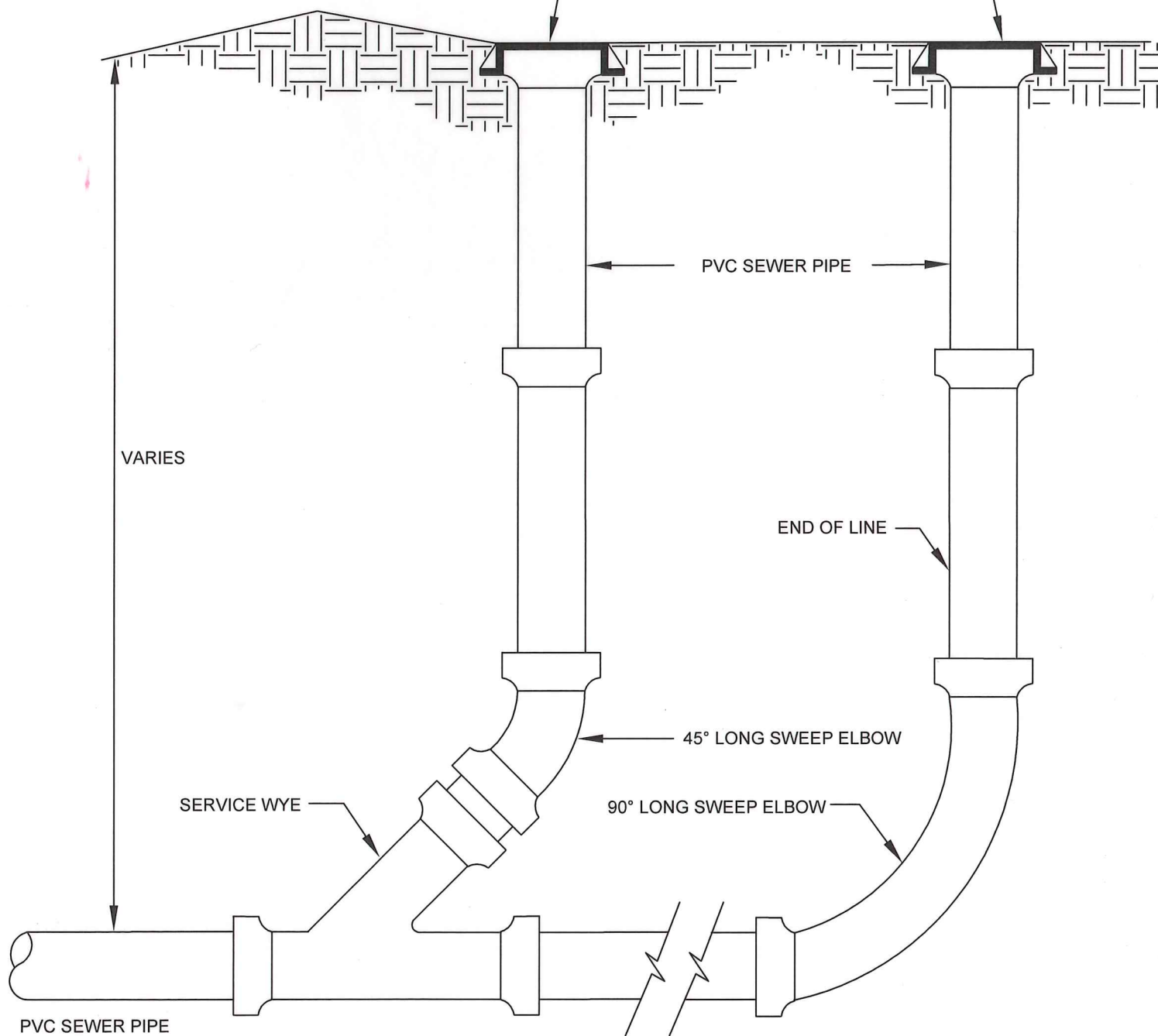
APPROVAL 5/24/12

CITY ENGINEER

CITY OF RICHFIELD
ENGINEERING DIVISION

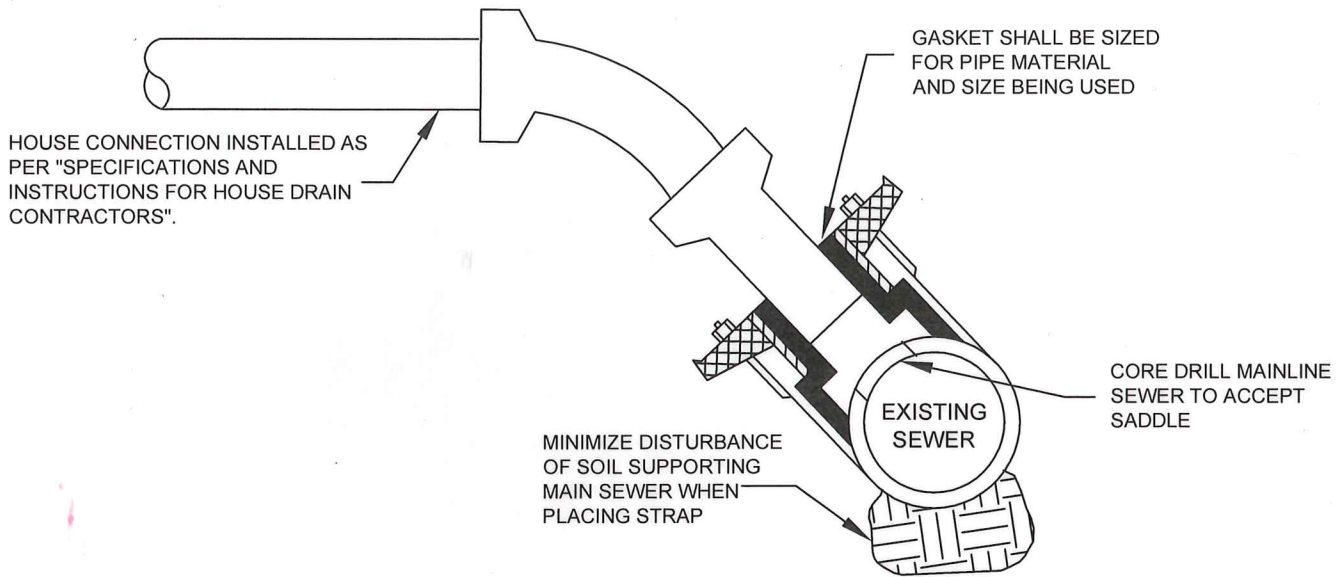


- INSTALL METER BOX AND COVER (FORD A-1) OR APPROVED EQUAL OVER ALL PVC CLEANOUTS LOCATED IN PAVED DRIVEWAYS AND/OR PARKING STALLS



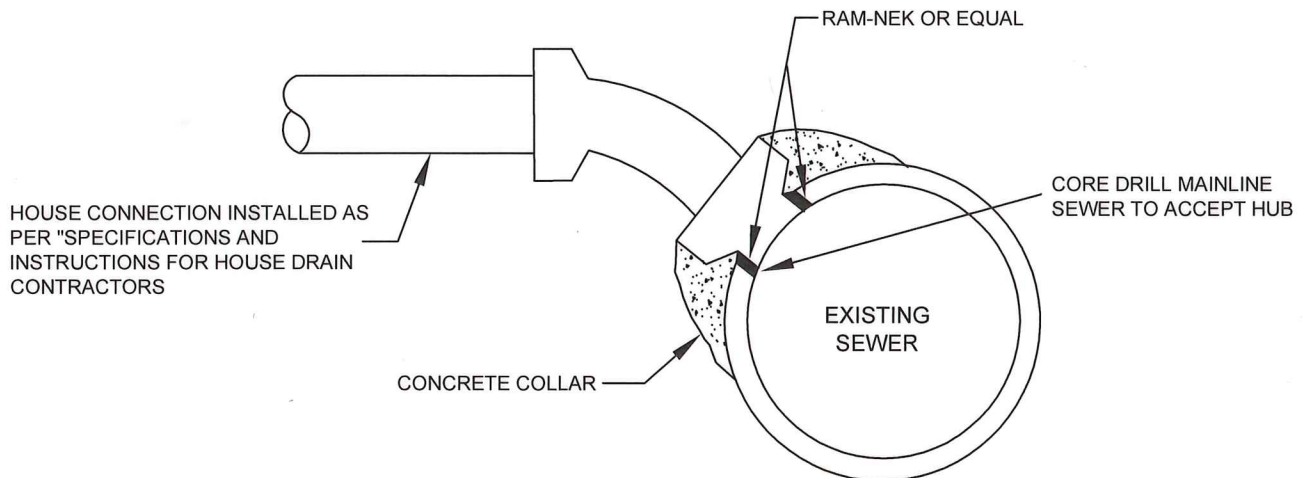
RICHFIELD
PUBLIC
WORKS

PUBLIC SEWER O.D. 48" OR LESS



- NOTES:
1. SEWER SADDLE TO BE ROMAC INDUSTRIES, INC. STYLE "CB" SADDLE OR APPROVED EQUAL.
 2. PVC SERVICES CONNECTED TO PVC OR VCP (10" OR LESS) SEWER MAY ALSO BE PVC SADDLE TEE AND GASKET SECURED TO PIPE WITH TWO STAINLESS STEEL COMPRESSION STRAPS. PVC SADDLE TO BE GPK OR APPROVED EQUAL.
 3. ALL SEWER SERVICE SADDLES TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

PUBLIC SEWER O.D. GREATER THAN 48"



- NOTES:
1. THE HUB SHALL BE SAWCUT TO CONFORM TO THE INTERIOR OF THE PIPE.
 2. GROUT THE HUB WITH A MINIMUM OF 3" CONCRETE COLLAR. DO NOT ENCASE HUB JOINT TO SERVICE PIPE.

STANDARD
DETAIL NO.
SAN-05

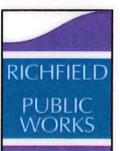
**SADDLE CONNECTION OF
HOUSE SERVICES**

APPROVAL

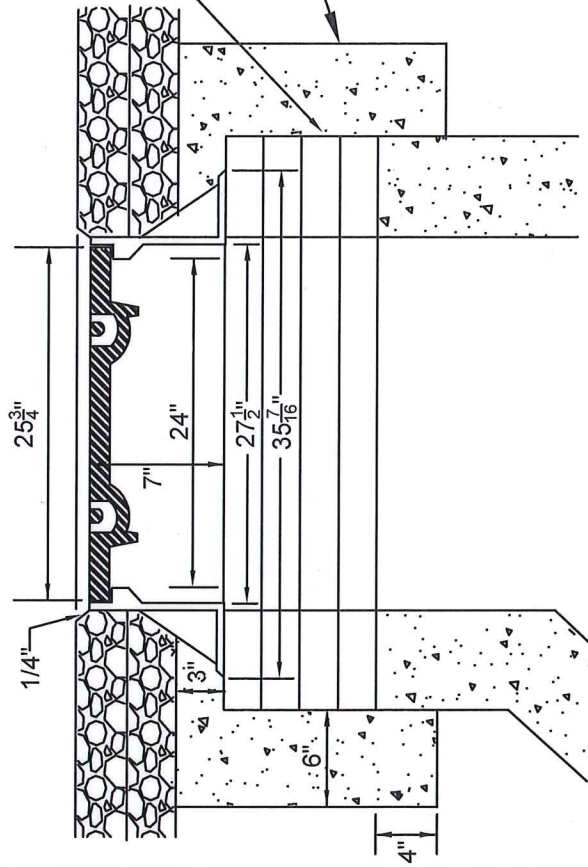
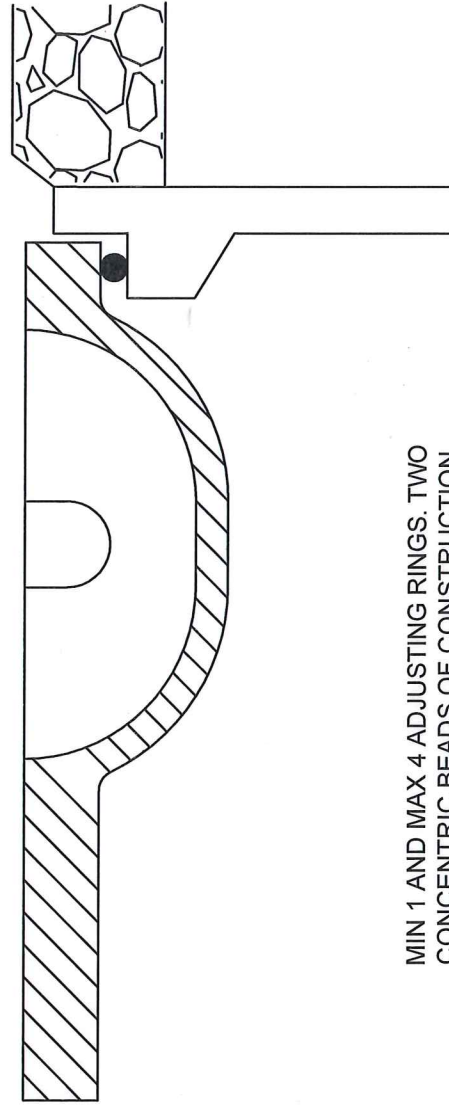
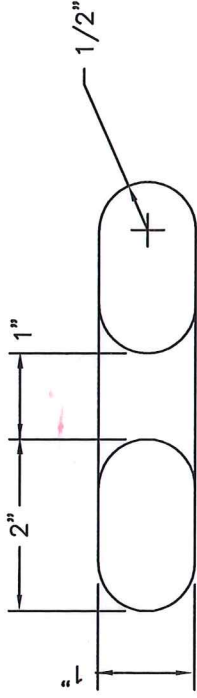
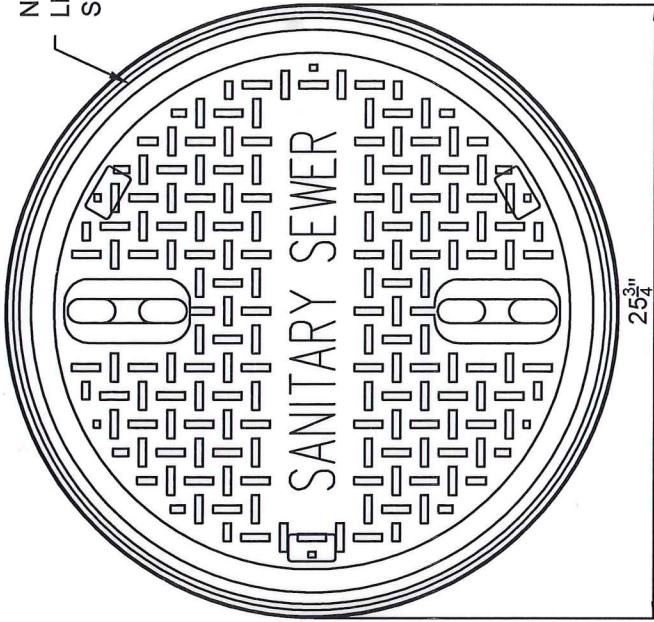
9/24/12

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CITY ENGINEER

**CITY OF RICHFIELD
ENGINEERING DIVISION**



NEENAH R-1733 (5044
LIGHTWEIGHT SELF-
SEALING SOLID LID)



MIN 1 AND MAX 4 ADJUSTING RINGS. TWO
CONCENTRIC BEADS OF CONSTRUCTION
ADHESIVE, PL-500 OR APPROVED EQUAL,
USED BETWEEN RINGS AND TO SEAL RINGS
TO STRUCTURE

CONCRETE COLLAR TO ENCASE CASTING
AND CONCRETE ADJUSTING RINGS. USE
CONCRETE CURB AND GUTTER MIX OR
MORTAR MIX (SPEC.2506.2B) FOR COLLAR

- NOTES: 1. WEIGHT- 122 LBS
2. MACHINE BEARING SURFACE.
3. LETTERED SANITARY SEWER W/2 CONCEALED PICKHOLES
4. H-20 LOAD OR GREATER.
5. 1/4" NEOPRENE O-RING GASKET SET IN 1/8" x 1/4" MACHINE GROOVE
AND CHEMICALLY FASTENED IN PLACE.

R-1733 SERIES MANHOLE WITH SELF SEALING LID (CONE SECTION)

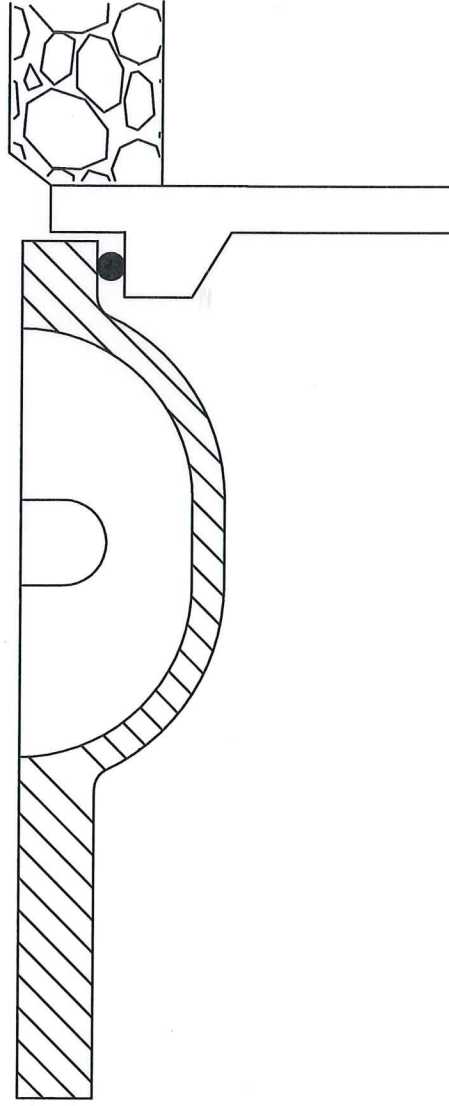
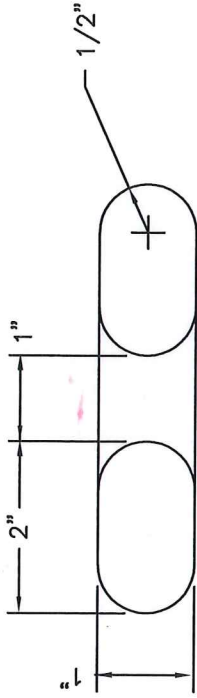
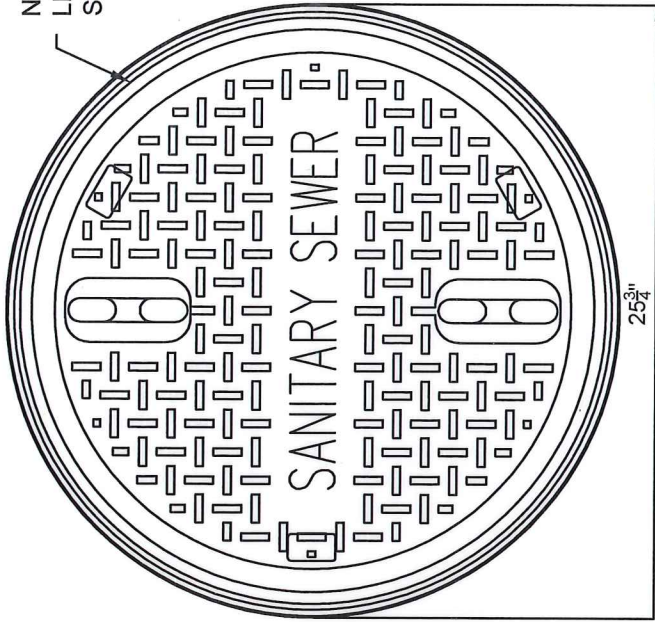
STANDARD
DETAIL NO.
SAN-06A

APPROVAL 12/16 20 14
CITY ENGINEER

CITY OF RICHFIELD
ENGINEERING DIVISION



NEENAH R-1733 (5044
LIGHTWEIGHT SELF-
SEALING SOLID LID)

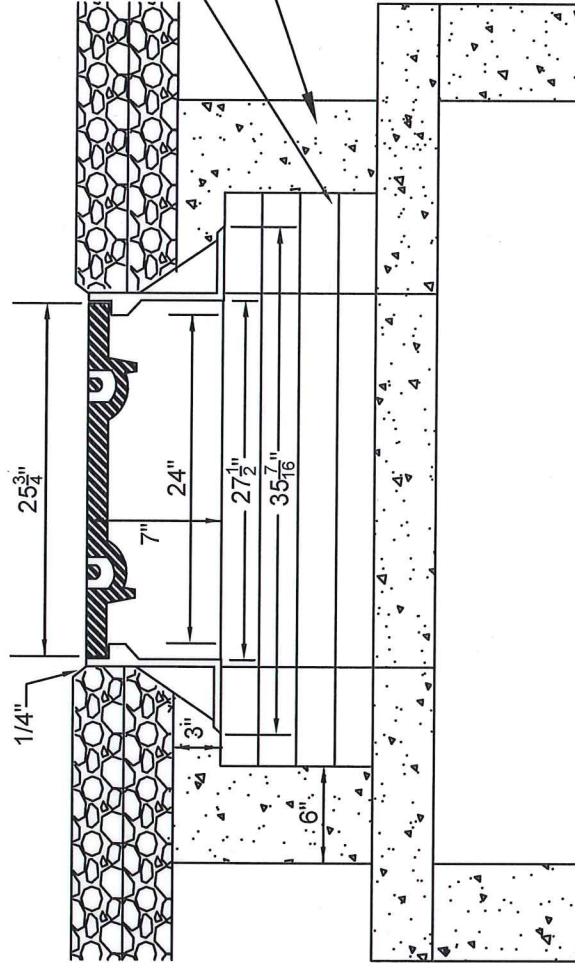


MIN 1 AND MAX 4 ADJUSTING RINGS. TWO
CONCENTRIC BEADS OF CONSTRUCTION
ADHESIVE, PL-500 OR APPROVED EQUAL,
USED BETWEEN RINGS AND TO SEAL RINGS
TO STRUCTURE

CONCRETE COLLAR TO ENCASE CASTING
AND CONCRETE ADJUSTING RINGS. USE
CONCRETE CURB AND GUTTER MIX OR
MORTAR MIX (SPEC.2506.2B) FOR COLLAR

NOTES:

1. WEIGHT- 122 LBS
2. MACHINE BEARING SURFACE.
3. LETTERED SANITARY SEWER W/2 CONCEALED PICKHOLES
4. H-20 LOAD OR GREATER.
5. 1/4" NEOPRENE O-RING GASKET SET IN 1/8" x 1/4" MACHINE GROOVE
AND CHEMICALLY FASTENED IN PLACE.



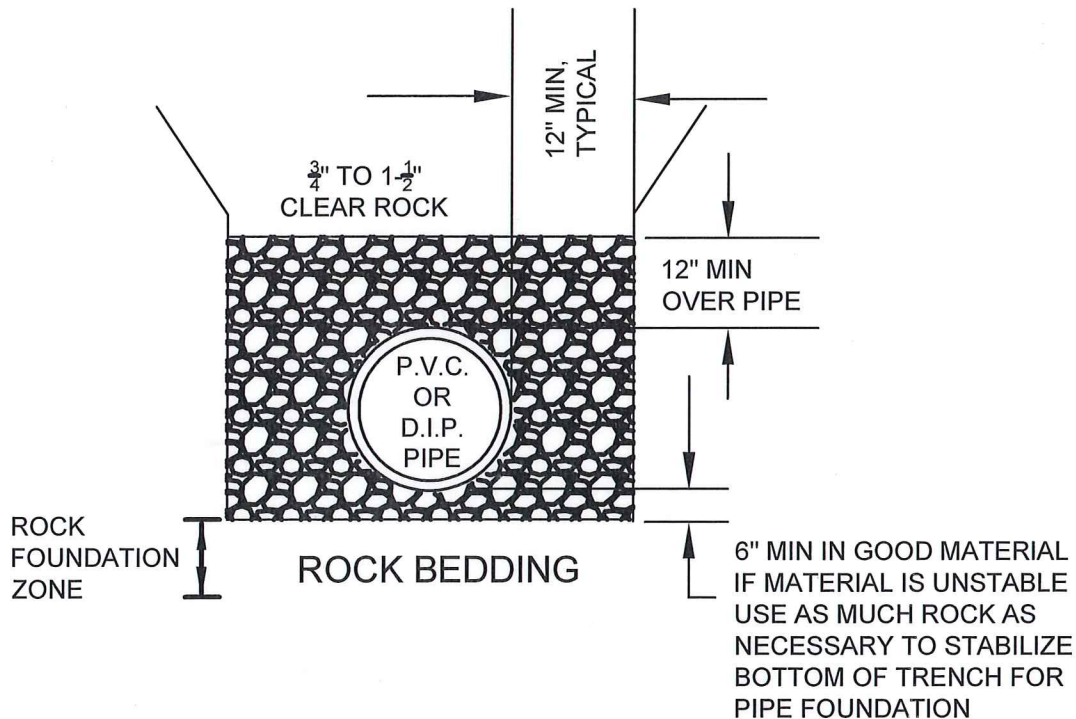
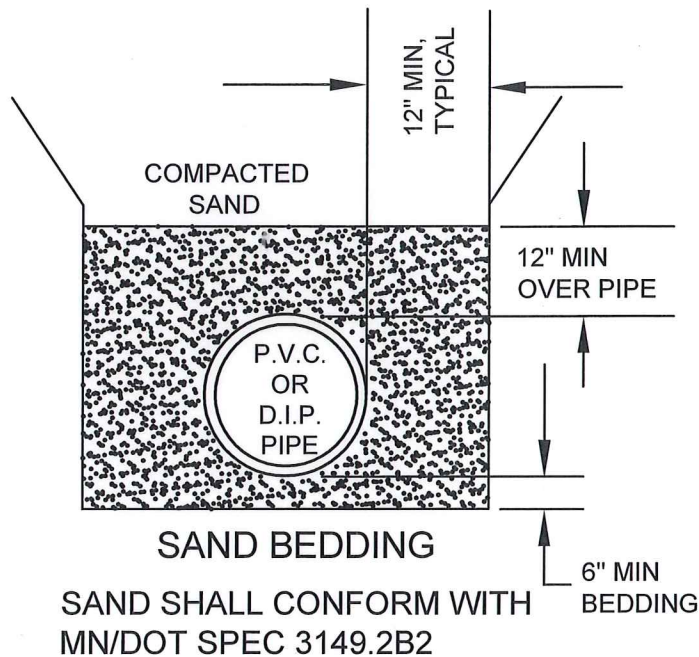
R-1733 SERIES MANHOLE WITH SELF SEALING LID (TOP SLAB)

STANDARD
DETAIL NO.
SAN-06B

APPROVAL 2/16/20 20 14
CITY ENGINEER

CITY OF RICHFIELD
ENGINEERING DIVISION





- NOTES: 1. BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE PIPE UNLESS MODIFIED IN THE CONTRACT DOCUMENTS.
2. BEDDING REQUIRED FOR ALL MAINS AND SERVICES.

STANDARD
DETAIL NO.
SAN-07

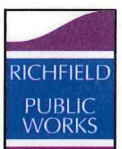
SANITARY SEWER BEDDING

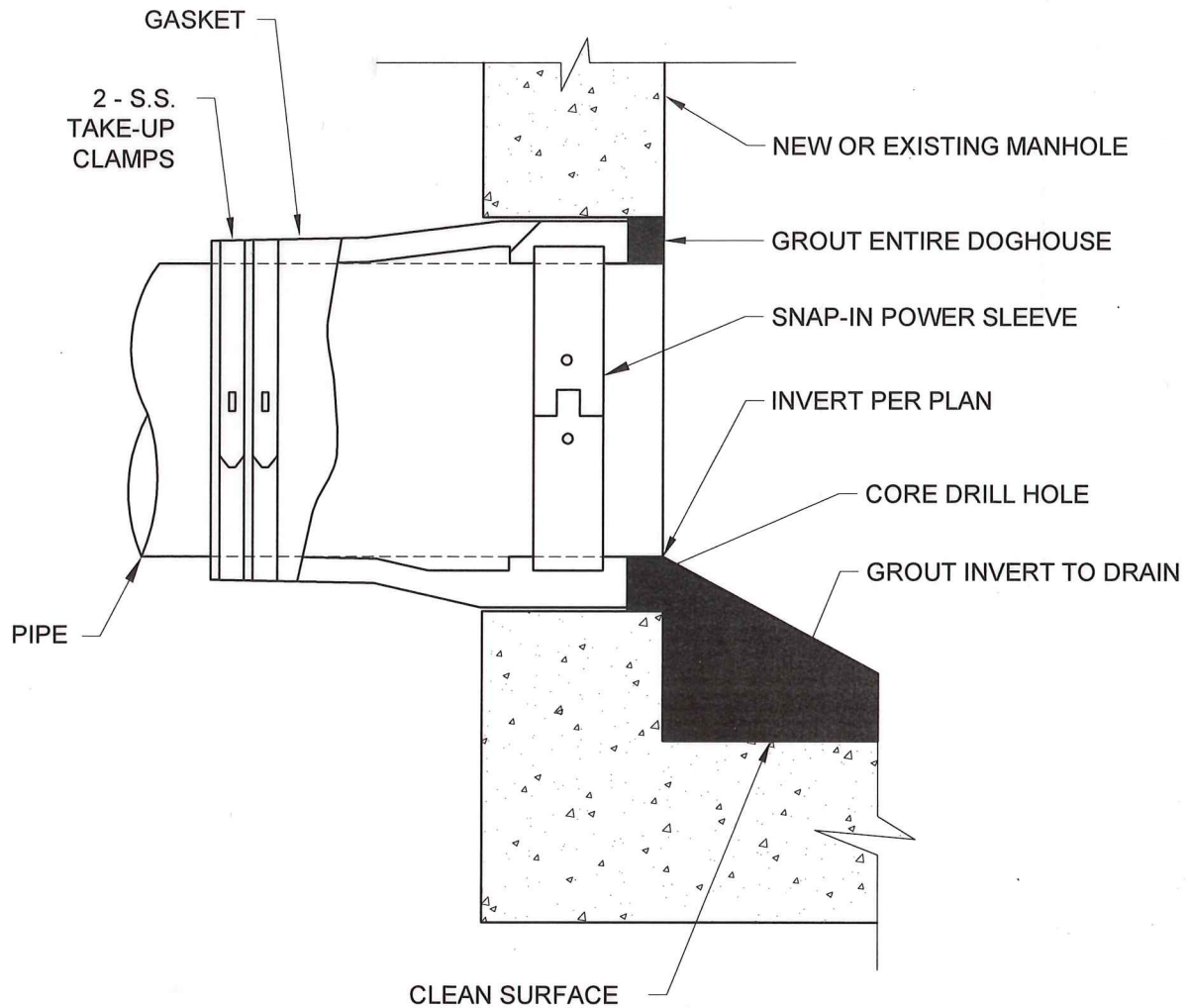
APPROVAL

12/16 20 14

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ENGINEERING DIVISION





NOTE: 1. CONNECTION TO EXISTING SANITARY SEWER
MANHOLE SHALL BE CORE DRILLED WITH A SNAP
IN BOOT.

STANDARD
DETAIL NO.
SAN-09

WATER TIGHT SNAP-IN-SLEEVE

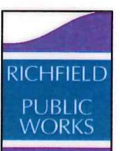
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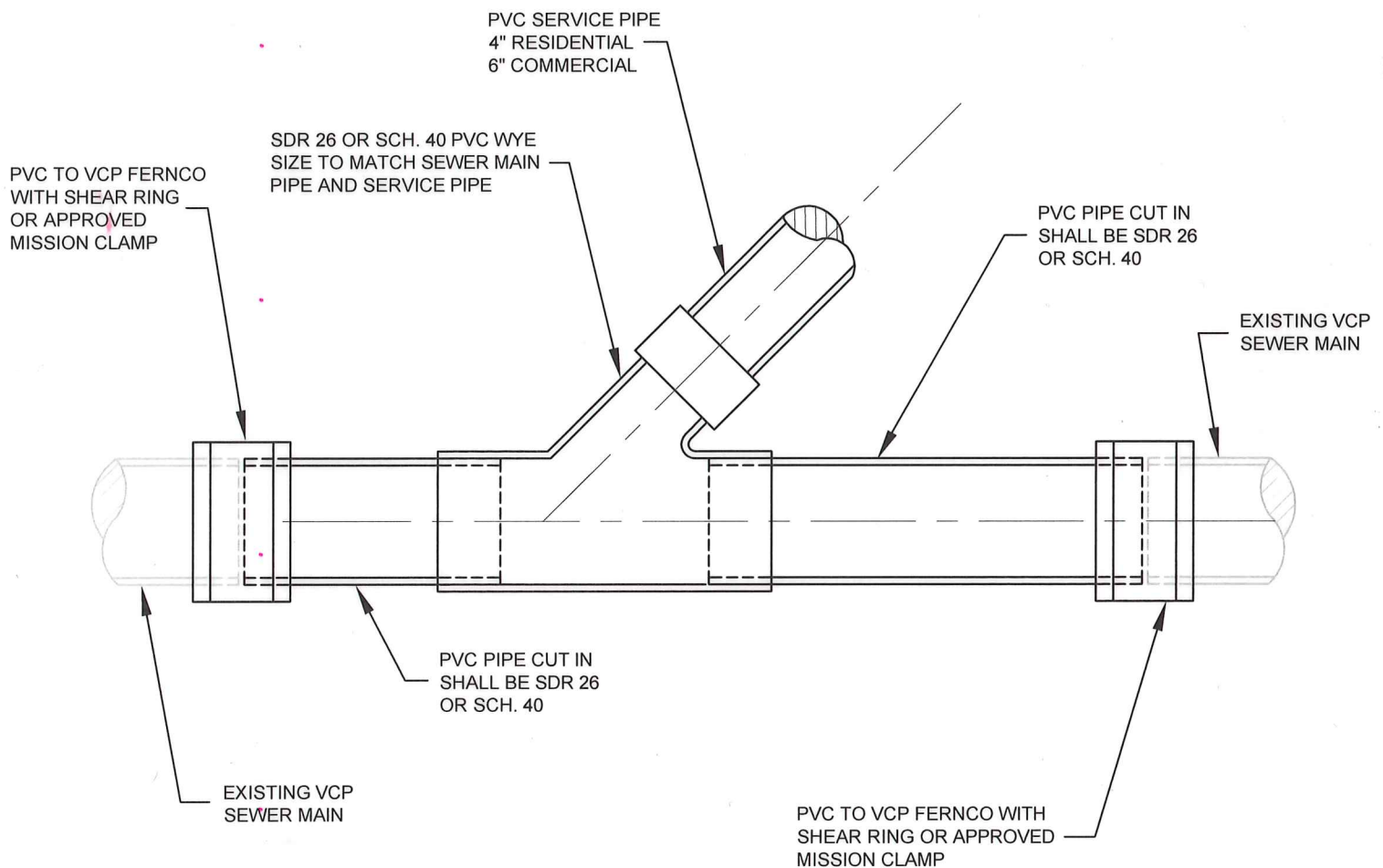
5/24/12

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CITY OF RICHFIELD
ENGINEERING DIVISION





- NOTES: 1. SEE STANDARD DETAIL NO SAN-03 FOR TYPICAL SANITARY SEWER SERVICE CONNECTION DETAIL.
2. CLEAN CUT ALL PIPE ENDS.

STANDARD
DETAIL NO.
SAN-10

SANITARY SEWER SERVICE
PVC WYE CUT INTO VCP
SEWER MAIN

APPROVAL

3/20 2013

CITY ENGINEER

CITY OF RICHFIELD
ENGINEERING DIVISION

